Polar Sunrise

Richard Glenn –
Good morning everybody, welcome to Barrow. I'm dressed here in the Barrow equivalent suit jacket which is our dress clothing here. In a few hours if you open up the windows here off to my left, you'll see the sun making its creep above the horizon which is a beautiful sight when the weather lets us see it. And yesterday we had a hint of it around 1:00 and that's the way of life here in January, the sun come up above the horizon here and the next day it comes up a little bit to the left and goes down a little bit to the right. And that stretch above the horizon just keeps getting longer and longer and higher and higher as January turns to February, February turns to March and so on. And by the end of April and the beginning of May, instead of just coming up it's making nearly circular path all the way around and by the time that August comes around it starts to dip to the horizon off to the Northwest. It's a wonderful progression to watch and I'm glad you're hear to watch just a part of it.

Crawford Patkotak –
It's a good thing you're seeing more daylight but it also means it's going to get colder and it's a friendly reminder that another whaling season is upon us and that we have to get ready and as we get more and more daylight, it gets colder and colder, the closer the whaling, the spring whaling season is going to be, it's an exciting time; not only that the sun it returning but whaling season is coming close.

John Cooper –
We have the natural environment, the polar environment in terms of how it relates to the sun on a seasonable basis because when an object has a tilt like the Earth does at a 23 degrees, then that means it has a seasonal variation of some light in those regions and so we are explicitly experiencing that in this week of the conference where the time of daylight is going from 0 just before the conference starts to several hours by the time of the end of the conference. And so we sort of get a number of different kinds of experiences of these polar and icy environments here in Barrow. The ice environment, both the sea ice environment and the tundra which is everywhere; it isn't anywhere in particular, it is everywhere around us and underneath us for kilometers apparently, frozen in time from millions of years ago and so this is an icy world.

Dale Cruikshank – (dark brown shirt)
Now in the 50 years that has transpired the IGY, we've learned a tremendous amount about the variability of the sun, about it's influence on the Earths systems, not just the surface but the atmosphere, ionosphere and so on. But another factor that we've learned about the sun concerns it's earliest evolution at the time the sun was very young. We realize now for example that the sun was much dimmer as the planets formed and as the structures of the solar system came together. And so we have to take into account the very long time scale changes and the output and the energy of the sun as it pertains to the - not only the origin - but the development of the planets; Earth and all the others, and

their current situations; vis-a-vis the radiation and the particles that are coming out of the sun.